RAW MILK VS. PASTEURIZATION

From Armchair Science, London (April, 1938)

There is no substitute for clean raw milk as a food so far as children are concerned. Science has not yet succeeded in providing, in the pasteurized variety, those essential qualities that are the only real foundation for a healthy child.

Unfortunately, many grossly distorted statements are current regarding our milk supply. If we are to believe the protagonists of the Pasteurization-of-allmilk-at-all-costs Party, raw milk is as good, or rather as bad, as rat poison -although as the Minister of Agriculture recently stated, "the human race existed long before Pasteur was heard of."

The process of pasteurization was debated in the House of Commons and the suggestion made that no raw milk should be sold for human consumption. This would mean installation of expensive machinery by every supplier, and if it should become compulsory there is little doubt that many small firms would shut down and the business pass into the hands of a few big dealers.

If we are to be compelled to drink pasteurized milk, we should at least understand what pasteurization means. It set out to accomplish two things: Destruction of certain disease-carrying germs and the prevention of souring of milk. These results are obtained by keeping the milk at a temperature of 145 degrees to 150 degrees F. for half an hour at least and then reducing the temperature to not more than 55 degrees F.

It is undoubtedly beneficial to destroy dangerous germs, but pasteurization does more than this -- it kills off harmless and useful germs alike, and by subjecting the milk to high temperatures destroys some nutritious constituents.

With regard to the prevention of souring; sour raw milk is very widely used. It is given to invalids, being easily digested, laxative in its properties, and not unpleasant to take. But, after pasteurization, the lactic acid bacilli are killed. The milk in consequence cannot become sour and quickly decomposes, while undesirable germs multiply very quickly.

Pasteurization's great claim to popularity is the widespread belief, fostered by its supporters, that tuberculosis in children is caused by the harmful germs found in raw milk. Scientists have examined and tested thousands of milk samples, and experiments have been carried out on hundreds of animals in regard to this problem of disease-carrying by **milk**. But the one vital fact that seems to have been completely missed is that it is CLEAN raw milk that is wanted. If this can be guaranteed no other form of food for children can, or should be, allowed to take its place.

Dirty milk, of course, is like any other form of impure food--a definite menace. But Certified Grade A Milk, produced under Government supervision and guaranteed absolutely clean, is available practically all over the country and is the dairyfarmer's answer to the pasteurization zealots.

Recent figures published regarding the spread of tuberculosis by milk, show, amongst other facts, that over a period of five years, during which time 750 children belonging to a special organization received a pint of raw milk daily. One case only of the disease occurred. During a similar period when pasteurized milk had been given, 14 cases were reported.

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Besides destroying part of the vitamin C contained in raw milk and encouraging growth of harmful bacteria, pasteurization turns the sugar of milk, known as lactose, into beta-lactose -- which is far more soluble and therefore more rapidly absorbed into the system, with the result that the child soon becomes hungry again.

Probably pasteurization's worst offence is that it makes insoluble the major part of the calcium contained in raw milk. This frequently leads to rickets, bad teeth, and nervous troubles, for sufficient calcium content is vital to children; and with the loss of phosphorus, also associated with calcium, bone and brain formation suffer serious setbacks.

Pasteurization also destroys 20 percent of the iodine present in raw milk, causes constipation and generally takes from the milk its most vital qualities.

In face of these facts -- which are undeniable -- what has the Pasteurization Party to say? Instead of compelling dealers to set up expensive machinery for turning raw milk into something that is definitely not what it sets out to be -a nutritious, health giving food -- let them pass legislation making the dairyfarmers produce clean raw milk -- that is milk pure to drink with all its constituents unaltered.

The above was published in MAGAZINE DIGEST - June 1938. Armchair Science is a Eritish Medical Journal.

"Guinea pigs fed raw milk with an addition of skim milk powder, copper and iron salts, carotene, and crange juice, grew well and showed no abnormalities at autopsy. When pasteurized whole milk was used, deficiency symptoms began to appear, wrist stiffness being the first sign. The substitution of skim milk for whole milk intensified the deficiency which was characterized by great emaciation and weakness before death.... At autopsy the muscles were found to be extremely atrophied, and closely packed, fine lines of calcification ran parallel to the fibers. Also calcification occurred in other parts of the body. When cod liver oil replaced carotene in the diet, paralysis developed quickly. The feeding of raw cream cured the wrist stiffness." Annual Review of Biochemistry, Vol. 18, Page 435. (1944).

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